

TWO NEW SPECIES OF CENTRAL AMERICAN *HEDYCHRIDIUM*  
ABEILLE DE PERRIN (HYMENOPTERA: CHRYSIDIDAE)

LYNN S. KIMSEY

Bohart Museum of Entomology, Department of Entomology, University of California, Davis, CA 95616, U.S.A. (e-mail: lskimsey@ucdavis.edu).

---

*Abstract.*—Two new species, *Hedychridium costaricae* and *H. elisar*, are described from Costa Rica. These are the first species of *Hedychridium* recorded for the Neotropical Region.

*Key Words:* *Hedychridium*, *costaricae*, *elisar*, Chrysididae, Hymenoptera, Neotropical Region

---

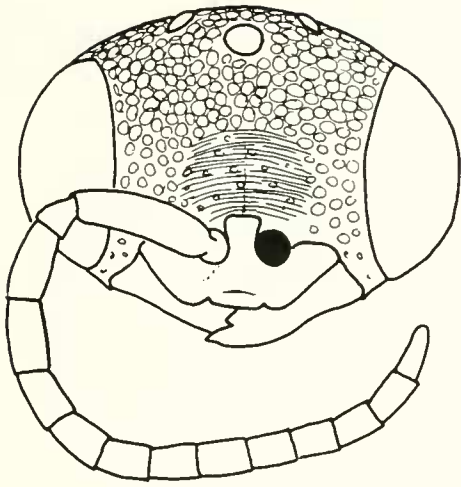
Bohart and Kimsey (1978) and French (1985) reevaluated the generic placement of known Neotropical species of *Hedychridium* Abeille de Perrin and determined that all actually belonged in the genera *Pseudolopyga* Krombein (*Hedychridium chilensis* (Mocsáry)) and *Exallopyga* French (*H. difficilis* Spinola and *H. guatemalensis* Cameron). As a result, *Hedychridium* species were only known in the Western Hemisphere from North America. However, intensive collecting by Frank Parker and INBio (Instituto Nacional de Biodiversidad) personnel in Costa Rica have discovered many biotic surprises not the least of which are two previously unknown species of *Hedychridium*, described below. These Costa Rican *Hedychridium* species have all of the features typical of *Hedychridium* including having tarsal claws with a single perpendicular submedial tooth, a simple mesopleuron without scrobal sulcus or omaulus and pronotal anterior margin with sublateral carina.

Specimens were obtained for this study from the Utah State University Collection, Logan (LOGAN), which is where material collected by Frank Parker has been deposited, and from INBio, Santo Domingo de

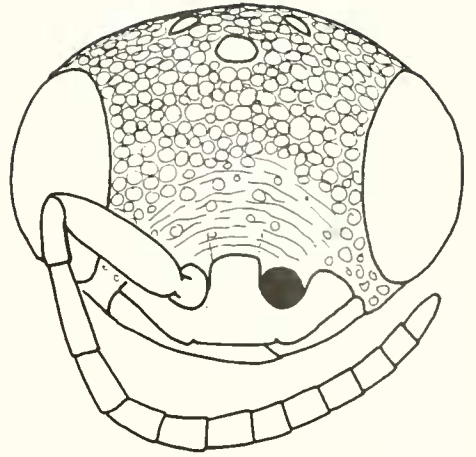
Heredia, Costa Rica (SANTO DOMINGO). Some paratypes have also been deposited in the Bohart Museum of Entomology, University of California, Davis (DAVIS). Type deposition is indicated in capital letters enclosed in parentheses.

*Hedychridium costaricae* Kimsey,  
new species  
(Figs. 1, 3, 4)

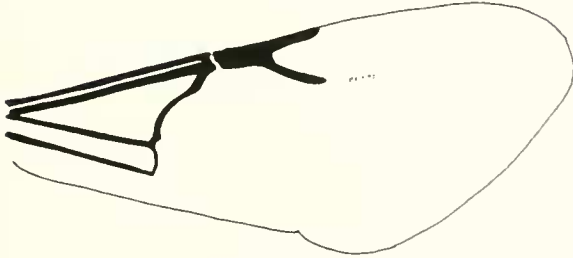
Male.—Body length 2.0–3.5 mm; face (Fig. 1); malar space I midocellus diameter; subantennal space one midocellus diameter, face and vertex with dense nearly contiguous punctures; scapal basin with narrow medial, sparsely punctate zone covered with dense transverse striae; flagellomere I twice as long as broad and more than twice as long as pedicel; flagellomeres II–III 1.4–1.5× as long as broad; flagellomere XI 2.6–2.7× as long as broad; thoracic dorsum with contiguous, medium punctures, becoming slightly less dense medially; pronotal side densely punctate; mesopleuron with dense, contiguous medium-sized punctures; forefemur without ventral carina or angle; forewing R1 and Rs extending equally far toward wing tip, medial vein joining MCu at a right angle (Fig. 3); propodeal



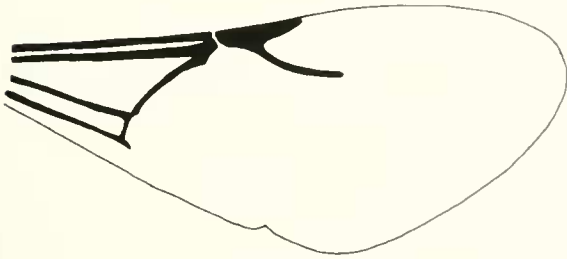
1. *costaricae*



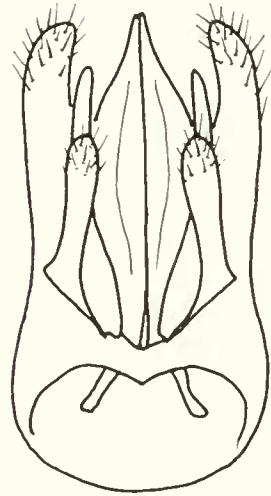
2. *elisar*



3. *costaricae*



4. *elisar*



5. *costaricae*

Figs. 1-5. 1, 2, Front view of face with one antenna removed. 3, 4, Forewing venation. 5, Male genital capsule, ventral view.

tooth narrowly triangular; tergal punctures 0.5-1.0 puncture diameters apart; apical tergum with apical margin appearing rolled under; genital capsule (Fig. 4); digitus slender and slightly clubbed apically, half as

long as gonostylus; aedeagus without apical bristles. Head and thorax blue with purplish band across face; terga blue, tergum II medially with large purple spot; tegula blue; coxae, femora and tibiae blue with non-me-

tallic red joints and tarsomeres; scape and pedicel dark blue; flagellum black; sterna I–III blue; wing membrane whitish, veins brown. Pubescence sparse, erect and pale; scapal basin without dense appressed pubescence.

Female.—Body length 2.5–3.5 mm; same as male except body color bluish green.

Type material.—Holotype ♂: Costa Rica, Guanacaste Prov., s Cañas, 11–15 March 1989, F. D. Parker (LOGAN). Paratypes (LOGAN, DAVIS, SANTO DOMINGO): 8 ♂, 25 ♀: same data as holotype except collection dates 21 Jan.–25 March 1989; 4 ♀: 14 km s Cañas, 12–17 Feb. 1989, F. D. Parker; 1 ♂: 4 March 1989, F. D. Parker; 1 ♀ Santa Rosa National Park, 28 Dec.–15 Jan. 1986, Gauld/Janzen.

Discussion.—This species belongs to the *crassum* group (Bohart and Kimsey 1978) and shares many similarities with *H. purum* Kimsey, including the short pedicel, whitish wings, similar wing venation and unmodified gastral tergum II and forefemur. However, *H. costaricae* can be distinguished from *H. purum* and other members of the *crassum* group by the long flagellomere I, shorter flagellomere XI and punctate pronotal side.

Etymology.—The species name, *costaricae*, refers to the country of collection.

***Hedychridium elisar* Kimsey, new species**  
(Figs. 2, 4)

Female.—Body length 2–3 mm; face (Fig. 2); malar space 1.2 midocellus diameters; subantennal space one midocellus diameter; scapal basin with coarse contiguous punctures and medial zone of dense transverse striae; vertex and thoracic dorsum with contiguous medium-sized punctures, becoming larger on scutellum; flagellomere I 3×, as long as broad, less than twice as long as pedicel; flagellomere II 1.9–2.0× as long as broad; flagellomere III 1.4× as long as broad; flagellomere XI 2.8–3.0× as long as broad; pronotal lobe punctate laterally; mesopleuron with me-

dium-sized contiguous punctures except for densely cross-ridged zone above midcoxa; forefemur without ventral carina or angle; forewing Rs twice as long as R1, medial vein joining MCu at an obtuse angle (Fig. 4); propodeal tooth narrowly triangular; tergal punctures small and contiguous and transversely striatiform; apical tergum with apical margin appearing rolled under. Head, thorax and abdomen bluish green, becoming black on vertex, between notauli, on a transverse band across pronotum, medially on scutellum, medially and the lower half of propodeum, and the middle of terga I–III; tegula brown, with slight green tint; coxae, femora, tibiae and scape greenish; tarsomeres, pedicel and flagellum dark brown; sterna brown; wing membrane brownish, veins dark brown. Pubescence sparse, erect and pale; scapal basin without dense appressed pubescence.

Type material.—Holotype ♀: Costa Rica, Guanacaste Prov., s Cañas Exp. Sta., 8–18 March 1988, F. D. Parker (LOGAN). Paratypes (LOGAN, DAVIS): 2 ♀, same data as holotype.

Discussion.—Ordinarily males are chosen as holotypes in *Hedychridium* because they have more diagnostic features. However, in this case a single male specimen included in the Frank Parker material was so badly discolored and greasy, with mutilated wings, that it was not included even in the paratype series. *Hedychridium elisar* belongs to the *amabile* group and keys out to *H. rasile* Bohart and *H. solierellae* Bohart and Brumley in Bohart and Kimsey (1978), based on the long pedicel and flagellomere I and long Rs vein. The distinctive coloration of the body and punctuation of gastral tergum II being contiguous and slightly striatiform will distinguish *H. elisar*, from both *H. costaricae* and other members of the *amabile* group.

Etymology.—The name *elisar* is an arbitrary combination of letters suggested by

the species that most closely resembles this one, *rasile*; *elisar* is a noun in apposition.

#### ACKNOWLEDGMENTS

This study was made possible by the assistance of Terry Griswold at Utah State University, Ian Gauld (The Natural History Museum, London), and the staff of INBio.

#### LITERATURE CITED

- Bohart, R. M. and L. S. Kimsey. 1978. A revision of the New World species of *Hedychridium*. Proceedings of the Biological Society of Washington 91: 590–635.
- French, L. D. 1985. *Exallopogyga*, a new genus of neotropical Elampinae. Journal of the Kansas Entomological Society 58: 620–625.
- Kimsey, L. S. and R. M. Bohart. 1991 (1990). The chrysidid wasps of the world. Oxford Univ. Press, Oxford ix + 652 pp.